UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,912	04/27/2005	Giuseppe Montalbano	FR03 0009 US	4943

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EXAMINER
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ART UNIT	PAPER NUMBER
2611	

NOTIFICATION DATE	DELIVERY MODE
07/29/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 April 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-19</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-19</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>07 April 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☒ All　b)☐ Some *　c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date <u>4/27/2005 & 2/21/20006</u>.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

Specification

1.   The disclosure is objected to because on page 1, line 10, page 7, line 20, and page 27, line 11 it contains embedded hyperlinks and/or other form of browser-executable codes. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Objections

2.   Claims 1, 2, 4-8, 14, 15-18, and 19 are objected to because of the following informalities:

   (1) In claim 1, line 1, insert **--A--** in the beginning on the line.

   (2) In claims 2-14, line 1, replace **"A"** with **--The--** in the beginning of the line.

   (3) In claims 16-17, line 1, replace **"An"** with **--The--** in the beginning of the line.

   (4) In claims 16-17, line 1, replace **"a"** with **--the--** between **"estimating"** and **"propagation"**.

   (5) In claim 18, line 1, replace **"an"** with **--the--** between **"comprising"** and **"estimator"**.

   (6) Claims 1 and 15 are objected because the elements of the claim are not recited as steps (or the method claims is inconsistent with the format of the method claims in the US applications). The elements of the method claim are steps which

should usually be verbal phrases introduced by a ground or verbal noun (the "ing" form

of a verb). For example on line 5 of claim 1, "said propagation channels being modeled"

should be --modeling said propagation channels--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3.   Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

(1) In claim 1, lines 4-8, the claim recites limitations *"said propagation channels being*

modeled as a linear superposition of a finite number of discrete multipath components (p=1,..., P)

following an uncorrelated-scattering wide-sense stationary model, a multipath component being

characterized by a time-varying multipath complex coefficient (Cp (t) and βpCp (t)) and a delay (Tp)".

and in claim 15, lines 5-9, the claim recites *"said propagation channels being modeled as a*

linear superposition of a finite number (p=1,..., P) of discrete multipath components following an

uncorrelated-scattering wide-sense stationary model, a multipath component being characterized by a

time-varying multipath complex coefficient (Cp (t) and βpCp (t)) and a delay (Tp)". It is unclear

what these limitations are acquiring. The examiner is respectfully requesting clarifying

the limitation in the claims clearly and explicitly. However, the examiner is interpreting

that *"said propagation channels being modeled as a linear superposition of a finite number of discrete*

multipath components (p=1,..., P) following an uncorrelated-scattering wide-sense stationary model, a

multipath component being characterized by a time-varying multipath complex coefficient (Cp (t) and

βpCp (t)) and a delay (Tp)" to be channel estimation in a multipath environment.

(2) Claim 1 recites the limitation "the presence of transmit beamforming" in line 1. There is insufficient antecedent basis for this limitation in the claim.

(3) Claim 1 recites the limitation "the structure" in line 2. There is insufficient antecedent basis for this limitation in the claim.

(4) Claim 1 recites the limitation "said second logical channel" in line 3. There is insufficient antecedent basis for this limitation in the claim.

(5) Claim 2 recites the limitation "a second channel (DPCH)" in line 8. In the claim there is no limitation of <u>a first channel (DPCH)</u>. Therefore, there is insufficient antecedent basis for this limitation in the claim.

(6) Claim 2 recites the limitation "the lowest symbol rate" in line 13. There is insufficient antecedent basis for this limitation in the claim.

(7) Claim 3 recites the limitation " the presence of transmit beamforming" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

(8) Claim 3 recites the limitation "the first sub-channel (DPDCH)" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

(9) Claim 3 recites the limitation "said logical" in line 5. There is insufficient antecedent basis for this limitation in the claim.

(10) Claim 3 recites the limitation "a second channel (DPCH)" in line 7. In the claim there is no limitation of <u>a first channel (DPCH)</u>. Therefore, there is insufficient antecedent basis for this limitation in the claim.

(11) Claim 3 recites the limitation "the lowest symbol rate" in lines 11-12. There is insufficient antecedent basis for this limitation in the claim.

(12) Claim 3 recites the limitation "the cross-correlation" in line 15. There is insufficient antecedent basis for this limitation in the claim.

(13) Claim 3 recites the limitation "the autocorrelation" in lines 17-18. There is insufficient antecedent basis for this limitation in the claim.

(13) Claim 3 recites the limitation "the product" in line 24. There is insufficient antecedent basis for this limitation in the claim.

(14) Claim 15 recites the limitation "the presence of transmit beamforming" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

(15) Claim 15 recites the limitation "the structure" in line 2. There is insufficient antecedent basis for this limitation in the claim.

(16) Claim 16 recites the limitation "the first sub-channel (DPDCH)" in line 3. There is insufficient antecedent basis for this limitation in the claim.

(17) Claim 16 recites the limitation "a second channel (DPCH)" in line 4. In the claim there is no limitation of <u>a first channel (DPCH)</u>. Therefore, there is insufficient antecedent basis for this limitation in the claim.

(18) Claim 16 recites the limitation "the lowest symbol rate" in line 9. There is insufficient antecedent basis for this limitation in the claim.

(19) Claim 17 recites the limitation "a second channel (DPCH)" in line 4. In the claim there is no limitation of <u>a first channel (DPCH)</u>. Therefore, there is insufficient antecedent basis for this limitation in the claim.

(20) Claim 17 recites the limitation "the lowest symbol rate" in line 9. There is insufficient antecedent basis for this limitation in the claim.

(21) Claim 17 recites the limitation "the cross-correlation" in line 13. There is insufficient antecedent basis for this limitation in the claim.

(22) Claim 17 recites the limitation "the autocorrelation" in line 16. There is insufficient antecedent basis for this limitation in the claim.

(23) Claim 17 recites the limitation "the product" in line 24. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   **Claims 1 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Nilsson et al. (US 2003/0099216).**

Regarding claims 1 and 15:

As shown in figures 1-6, Nilsson et al. disclose a method for estimating a

propagation channel in the presence of transmit beamforming (abstract, par 0018, lines

1-6),

- accounting for the structure of two logical channels (CPICH, DPCI-I) and based on a

  common structure of corresponding propagation channels (abstract, par 0007, lines

  1-11, par 0033, lines 1-18),

- said second logical channel (DPCH) comprising two sub-channels (DPDCH,

  DPCCH) (302 in figure 3),

- said propagation channels being modeled (par 0011, lines 1-12) as a linear

  superposition of a finite number of discrete multipath components (signal component

  samples is interpreted to receive a finite number of discrete multipath components)

  (p=1,..., P) following an uncorrelated-scattering wide-sense stationary model (par

  0010, lines 1-11, par 0084, lines 1-14),

- a multipath component being characterized by a time-varying (par 0032, lines 8-10)

  multipath complex coefficient (C_p (t) and $\beta_p C_p$ (t)) and a delay (T_p) (par 0007, lines

  1-11, par 0011-par 0016).

Conclusion

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to KABIR A. TIMORY whose telephone number is

(571)270-1674. The examiner can normally be reached on 6:30 AM - 3:00 PM Monday-

Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kabir A Timory/
Examiner, Art Unit 2611
/Shuwang Liu/
Supervisory Patent Examiner, Art Unit 2611